

CLAIMS

1. An antibody or a fragment thereof which binds to the gp120 glycoprotein of HIV and has a dissociation constant (KD) value of 1.0×10^{-9} (M) or less.

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2. The antibody or fragment thereof according to claim 1, which is capable of recognizing as least a part of an amino acid sequence spanning from amino acid positions 308 to 330 of the gp120 glycoprotein.

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3. The antibody or fragment thereof according to claim 2, wherein the amino acid sequence spanning from amino acid positions 308 to 330 is as shown in SEQ ID NO: 6.

4. The antibody or fragment thereof according to any one of claims 1 to 3, wherein the antibody is a polyclonal antibody or monoclonal antibody.

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5. A monoclonal antibody or a fragment thereof to the gp120 glycoprotein of HIV, which is produced by a hybridoma cell having an accession number of FERM BP-08644.

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6. A humanized antibody or human antibody, or a fragment thereof, which comprises the V region of the antibody or fragment thereof according to claim 4 or 5.

7. A high affinity antibody-producing cell collectable from a GANP transgenic non-human mammal, or a progeny thereof, that was immunized with a polypeptide comprising at least a part of the amino acid sequence as shown in SEQ ID NO: 6 as an antigen.

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8. A cell producing a monoclonal antibody to the gp120 glycoprotein of HIV, which has an accession number of FERM BP-08644.

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9. A method of producing an anti-HIV antibody or a fragment thereof, comprising immunizing a GANP transgenic non-human mammal or a progeny thereof with a polypeptide comprising at least a part of the amino acid sequence as shown in SEQ ID NO: 6 as an antigen and collecting the antibody from the resultant mammal or progeny.

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10. A method of producing an anti-HIV antibody or a fragment thereof, comprising culturing a fusion cell composed of the cell according to claim 7 and a myeloma cell, or the

monoclonal antibody-producing cell according to claim 8, and collecting the antibody from the resultant culture.

5 11. A pharmaceutical composition comprising at least one selected from the group consisting of the antibody or fragment thereof according to any one of claims 1 to 5, and the humanized antibody or human antibody, or fragment thereof according to claim 6.

12. The pharmaceutical composition according to claim 11, which is a therapeutic for acquired immunodeficiency syndrome.

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13. A method of detecting HIV, comprising reacting the antibody or fragment thereof according to any one of claims 1 to 5, or the humanized antibody or human antibody, or fragment thereof according to claim 6 with the gp120 glycoprotein of HIV.

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14. An HIV detection kit comprising at least one selected from the group consisting of the antibody or fragment thereof according to any one of claims 1 to 5, and the humanized antibody or human antibody, or fragment thereof according to claim 6.